INDO-ORIENTAL HORAGINI (LEPIDOPTERA : LYCAENIDAE)

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SYNOPSIS

The isolated but closely allied genera *Horaga* Moore and *Rathinda* Moore fly in the triangle India–South China–Papua. They have a characteristic appearance and highly aberrant genitalia. They contain only eight species with about forty subspecies, to which four new ones are now added. All published names are discussed and a number of species and subspecies are illustrated for the first time, as are the ♂ genitalia of all species, complete and to the same scale.

Full references are given for all taxa, and a catalogue is included of the specimens in the British Museum (Natural History).

CONTENTS

INTRODUCTION

There are three small Indo-Oriental generic groups or tribes in the Theclinae subfamily of Lycaenidae which I refer to as the Horagini, the Cheritrini, and the Marmessini (**tribb. n.**). In the course of a current study of the last, problems involving species of the other two have repeatedly arisen, and the present survey has been compiled. Separate articles are planned for the Cheritrini and the Marmessini, but some repetition will be avoided by covering all three in the general remarks below on their status, and the full list of references appended should require only minor additions later.

There are 61 names involved in the nomenclature of the 2 genera *Horaga* and *Rathinda*. They have never yet been comprehensively surveyed though Seitz (1926) discussed 40 (figuring 12) out of the 52 then current. One of those omitted by Seitz was *syrinx* (Felder, 1860), the second senior taxon.

Seitz' work was based on that of Fruhstorfer, who had published two important preparatory articles in 1912 and 1914. These articles demonstrate one great difficulty in the genus *Horaga* ; that of distinguishing between the various races of *onyx*, which now appears as a mainly northern species, and those of the much more southerly *syrinx* (at that time known as *moulmeina*). In 1912, as will be seen in the synonymy under each name, Fruhstorfer listed 15 subspecies for *onyx*, including *moulmeina*. Two years later he had moved to the other extreme, allotting *moulmeina* 13 and leaving *onyx* with only 3. Seitz listed them all together, and so most of them remained till 1941.

Corbet (1941) dealt with 30 names, including 3 not mentioned by Seitz, in his appraisal of *Horaga* from the Malayan viewpoint. He recognized the importance of *syrinx* and, distinguishing between it and *onyx*, arranged their respective subspecies almost as they are below.

STATUS OF THE TRIBE

Each of the three tribes Horagini, Cheritrini and Marmessini forms a compact entity quite distinct anatomically from all other Lycaenidae. Each is smooth-eyed, has smoothly scaled palpi, antennae with gradual cylindric club, and a lobed hind wing with three tails of which the central one, that at vein 2, is the longest. These characters are also shared by the small genera *Eooxylides* de Nicéville and *Neomyrina* Distant which, however, are both of unmistakable appearance and have more normal Lycaenid genitalia, while the fore wing vein 5 of *Neomyrina* consistently originates much closer to vein 6 than to vein 4 instead of mid-way between them.

The Horagini differ in appearance from the other two tribes, as also from *Eooxylides* and *Neomyrina*, in wing pattern and in having the hind wing tails all filamentous, the termen not being extended along any ; whereas the others have the tail at the end of vein 2, at least, broad-based, both the wing margin and the vein being produced along the vein for some distance.

The ♂ genitalia of each tribe are highly aberrant and quite characteristic. They are the most positive feature for identifying the allegiance of a doubtful ♂. They are small, compact and robust in the Cheritrini, whose stout aedeagus is charged with at least one cornutus and each of whose valvae carries dorsally a long rearward-curved horn. They are large, flat, simple, and loosely assembled in the Marmessini. In both these tribes the normal brachia or falces of the tegumen are entirely obsolete.

The Horagini, by contrast, has a heavy, elongate and most elaborate ♂ genitalia without cornuti or horned valvae, but incorporating long and specialized brachia (Pls. 2 and 3) which are unique among Lycaenidae. They are not the usual simple paired hooks curved rearwards, but in *Rathinda* are very long with a central spicule, and curve forwards to the bases of the valvae where they curl round for the tips to point rearwards. In *Horaga* they are folded ventrally above the valvae and are

asymmetric ; one, always the left, is simple and more or less falciform, while the right is modified in each species, spectacularly so in three.

The wing structure has been discussed by Moore (1881), de Nicéville (1890), and others in detail and will not be mentioned further except to emphasize that no feature can be found in it reliably to separate the two genera. *Rathinda* can readily be distinguished from *Horaga* by wing pattern and by ♂ genitalia, but not by shape or venation ; early definitions on the last basis for Indian forms resulted in the quite plausible description of a new *Rathinda* in the Philippines which in fact was an already known indigenous *Horaga*.

Wing venation is a valuable aid to the separation of genera, but there comes a point when individual or specific variation in some detail exceeds generic, and it becomes necessary to define recognizable genera on other grounds to avoid sinking them. The latter step should not be taken till far more is known about early stages, anatomy, courtship procedure and the significance of sexual insignia (" secondary sexual characters ") (cf. Varley, 1962). Such a situation was met in the Pierid genus *Saletara* Distant which (vide Cowan, 1955) had to be upheld distinct from *Appias* by the unusual ventral tuft of the ♀ when venation differences proved unreliable, and the recent merger of four good Lycaenid genera into *Jacoona* Distant on the grounds that no external feature could be found to distinguish their ♀♀ is regrettable ; the ♂♂ are so divergent, and habits and habitats so varied.

So whereas *Rathinda* could, on wing venation and shape and most other superficial characters, well be submerged in *Horaga*, which has page priority, I preserve it.

EARLY STAGES

The larva and pupa of *Rathinda amor* were described and well figured by Moore (1881 : 71, pl. 34, figs. 1b) mistakenly under the name *Spalgis epius* (whose correct early stages were illustrated by Aitken, 1894). Another illustrated account was given by Davidson, Bell & Aitken (1896 : 389, pl. 5, figs. 7, 7a). Sevastopulo (1935, and 1947 : 577) added further food-plants.

Horaga onyx was similarly treated by Mackinnon & de Nicéville (1898 : 387, pl. 5, figs. 18a, 18b), and on the following page *H. albimacula* (*viola*).

In all these accounts only the mature larva and the pupa are dealt with. Bell (1919 : 754) gave a most valuable description of the full life history of *Rathinda amor*, giving its habits and listing food-plants, after which he summarized all known about *H. onyx* and *H. albimacula*.

The known larvae of the tribe are very similar in form as might be expected, and unlike other Lycaenidae with from eleven (*Horaga*) to fifteen (*Rathinda*) triangular fleshy dorsal and lateral horns. The resulting prickly appearance of the larva inspired the colloquial name " Monkey Puzzle " for *Rathinda*, after the spinose Chilean conifer *Araucaria*. This species feeds on the flower and leaf buds of a large range of shrubs including Rubiaceae, Myrtaceae, Dipterocarpeae, Euphorbiaceae, Loranthaceae and Sapindaceae, while the only food-plant recorded for *Horaga* is *Coriaria nepalensis*.

The pupae, which stand erect from the upper surface of a leaf or from a twig, are

stout and strongly incurved ventrally. They are firmly fixed at the tail but otherwise free, and are capable of making a clicking noise.

There is no record of association with ants, whose presence is not necessary for survival.

SCOPE OF THE SURVEY

All the published names in the tribe are discussed below, giving references and the representation of each in the collections of the British Museum (Natural History), which is abbreviated hereafter to B.M. (N.H.).

The Synonymic List of the complete tribe is in the same sequence as the main discussion, gives the range of each subspecies, and acts as a summary.

Photographic illustrations are given on the Plates of at least one ♂ specimen of each species, and of the complete ♂ genitalia to scale of all species.

EXTRANEOUS TAXA

The following seven names have from time to time been included incorrectly in *Horaga* and will not be mentioned further :

achaja Fruhstorfer, 1912 : 233. Anatomically in the Marmessini ; to be dealt with in due course.

akara Ribbe, 1926 : 83. Assumed a misspelling for *anara* Fruhstorfer. See entry below under *celebica* Ribbe.

andamana Moore, 1877 : 589. A subspecies of *Hypolycaena erylus* (Godart), not a synonym of *Horaga rana* de Nicéville.

araotina Evans, 1933 : 413. A name which will be dealt with in Marmessini.

celebica Ribbe, 1926 : 83. " *Horaga?* . . . ähnlich *H. akara* . . .". From further lengthy description undoubtedly not a *Horaga*, probably either *Hypolycaena* or *Chliaria*.

himeros Fruhstorfer. Nomen nudum? Probably a label name only, for *Rathinda amor* in Ceylon. ♂ and ♀ " types " in B.M. (N.H.).

inari Wileman, 1908 : 325. Described as a *Tajuria* species. Applies to the Formosan subspecies of *Chliaria kina* Hewitson, see Corbet (1940 : 90).

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RATHINDA Moore, 1881

Rathinda Moore, 1881 : 99. " Type *R. amor* " (ibid.).
Cupido Hübner, 1819 : 77 [praeocc.]. Type *Papilio amor* Fabricius, fixed by Hemming, 1960 : 10.

The gender of the genus must be fixed. The derivation is obscure. It may reflect the sombre colour by coupling the words Hindi and *rat* (Urdu ; gender feminine) meaning night. Less probable is a connection with *ratha*, the Brahman processional car with red decoration, or with *rathin*, the ancient Brahman priesthood. But it may well be fanciful ; Moore had earlier in the same publication (p. 56) introduced the name *Rahinda* for a new Nymphalid genus. All things considered, it should be regarded as feminine.

Moore diagnosed the genus on the page following his *Horaga*, but defined no actual difference. The fore wing costal veins are more widely separated, and the hind wing termen more dentate, than is the case with *Horaga* species in India, but not with some from further east.

The hind wing pattern is distinctive and unusual in having a more or less complete submarginal band of reddish spots on the plain dark brown upperside, and a complex pattern of black strigae and whitish stipple on the buff underside. The white band which bisects the brown fore wing on both surfaces is arcuate from mid-costa to the outer end of the dorsum, not straight to mid-dorsum as in *Horaga* underside.

The ♂ genitalia are as aberrant as those of *Horaga*, and of similar stamp, but the long reflexed brachia with their central spine are quite distinct.

The differences between the two genera may be summarized as follows :

RATHINDA

Hind wing upperside with red markings ; no blue on the upperside ; underside base of fore wing and most of hind intricately patterned with black and whitish on buff ; white band on underside of fore wing arcuate from mid-costa to near tornus.

♂ brachia symmetric, each with a median spine, and excessively long ; 1½ times length of vinculum and the excess length curled round in the anterior, ventral, end of the vinculum.

No ♂ insignia.

Small ; confined to Ceylon and India south of the Himalaya.

HORAGA

Upperside often with blue or violet, but never red ; underside ground colour more or less uniform and markings simple ; fore wing underside white band inner edge straight, from mid-costa to mid-dorsum (or otherwise in the Philippine *lefebvrei* and the Formosan *rarasana*).

♂ brachia asymmetric, and not longer than the vinculum.

With or without ♂ insignia.

Mostly larger ; all seven species occur east of India, three reach there, of which two are found in Ceylon.

Rathinda amor (Fabricius)

(Pl. 1, fig. 10 ; Pl. 2, figs. 17a, b)

Papilio amor Fabricius, 1775 : 518, No. 321. India Orientali.
Papilio triopas Cramer, 1780 : 64, pl. 320, figs. G, H. Coromandel.
(The misspelling *triopus* has frequently appeared.)

Also figured by Seitz, pl. 146B, fig. f1 (♀) ; by Woodhouse (1952 : pl. 20, figs. 11, 12) ; and many others.

A species somewhat variable in size, markings and underside colour according to season, but with no constant geographic differences.

Fore wing length ♂ 10–14 mm., ♀ 12–16 mm.

It has been said not to occur above 2,500 feet, but Woodhouse (1952 : 138) gives it up to 3,000 feet in Ceylon and I have found it at that elevation in South India round Bangalore and Nandi Drug.

B.M. (N.H.), 106 ♂, 146 ♀, Ceylon, Peninsular India, East Pakistan, and Assam.

HORAGA Moore, 1881

Horaga Moore, 1881 : 98. " Type *H. onyx*." (ibid.).

Gender of the Genus

I deduce that the name is an allusion to the characteristic underside white stripe which, with its dark edging, gives a *trompe l'oeil* slit-like or gashed effect. The Greek feminine noun ῥαγας means a chink or rent, and the genus is of feminine gender.

Hewitson (1863 : 35), dealing with the Philippine species *lefebvrei*, at that time in the genus *Myrina*, remarked that Boisduval had proposed a new genus for it. No such name has been traced.

Generic Pattern

The basic wing pattern of the genus is simple. The upperside is dark brown to black with an ovate white fore wing discal patch ; the wing bases often being broadly blue or violet. The underside is ochreous to olive brown with a white stripe across both wings from mid-costa on the fore wing to near the hind wing tornus, where it becomes overlaid with shining metallic green scales and is sharply angled inwards to end at mid-dorsum ; this stripe is narrowly dark brown along its outer (fore wing) or inner (hind wing) edge. The hind wing tornus bears two large black spots, one marking the lobe, the other at the end of space 2, which are separated by a large black-dusted pale grey space. Interior to these markings is a series of metallic green lines.

The basic pattern is slightly modified for each species, but is only departed from materially on the undersides of the two eastern species *lefebvrei* and *rarasana*.

♂ Genitalia

The Felders, when naming *lefebvrei* in 1862, remarked on the long slender abdomen of the ♂, and its striking resemblance to the equally aberrant but quite unrelated species of the Miletini. In *Horaga* the length is caused by the elongation and inclination of the vinculum, which lies almost parallel to the abdominal axis and the valvae. Only in *onyx* and *syrinx* do the genitalia even approach normal size ; in the smallest species, *amethysta*, they are some 5 mm. long, comparable with half the fore wing length. The tegumen terminates in small paired subtriangular uncal plates. The aedeagus is simple and relatively small.

The left brachium or falx is in all species a more or less simple, curved, evenly tapered spike, crossing the other like half-folded-arms between the tegumen and the valvae from left to right.

The right brachium is not greatly differentiated from the left, nor does it vary much, among the more widespread western species. In the difficult *onyx-syrinx* complex, which has the more compact build, it is gradually flattened into a rounded blade, ending in an abrupt point which springs from the inner edge.

The right brachia of *albimacula* and the eastern *rarasana*, whose vinculum and tegumen are about twice as heavy, valvae longer and aedeagus relatively slimmer, are very similar.

Two species have a spur near the base of the right brachium. In the Philippine *lefebvrei* the brachium is darkly sclerotized for the basal third, where it emits a sharp spine ; it is then deflected inwards as a long, broad, square-shouldered blade ; and its terminal third is a stout curled spike, very brittle and easily broken off (it was broken in three out of six specimens examined). *H. selina* from Sulawesi (Celebes) has a prominent handle-like projection from the extreme base of the right brachium, which is then angled, and terminates in a broad square bifurcation.

The armature of the rare *amethysta* is even longer, and the right brachium crosses over to end in an abrupt saucer-shaped disc which it holds in a horizontal plane parallel to the wings when set. The function of this frying-pan affair defies conjecture. It also is brittle and frequently missing.

The valvae of all species are more or less densely covered on their inner faces with a vesture of fine hairs which may be spinose in the basal portion. They are blade-like and tapered, thick along the curved ventral edge, very thin dorsally, round-tipped, and specifically distinct.

Sexual Insignia

The ♂ insignia (" secondary sexual characters ") of the genus, when present, are modest. None are evident in *albimacula*, *amethysta*, and *selina*, and *rarasana* has only a small indistinct dark grey brand lying astride vein 1, about a third of its length from the base, on the fore wing underside.

Both *onyx* and *syrinx* have the fore wing dorsum slightly bowed outwards instead of being quite straight, and they bear a long oval ochreous brand in a larger white polished area about the centre of vein 1. Associated with this brand, on the upperside of the hind wing, is a dense patch of very fine, long, dark brown hairs rising from the basal half of space 7. These hairs, which are somewhat fugitive, are normally erect but may be flattened by the fore wing in set specimens. They have not been noted before and are obscure, being exactly concolorous with the basal half of the hind wing costa, but can be clearly seen when viewed in silhouette from the side at wing level. They are much finer than the ordinary recumbent hair-scales found on the wings of both sexes.

On the underside of the fore wing of the ♂ *lefebvrei* there is a similar but obscure white brand, and the hind wing upperside has a very dense tuft of slightly paler and much more concentrated, so less obscure, greyish brown hairs rising from the upper

half of the cell. The ♂ palpi of this species are of a greasy translucent cream colour, whereas those of the ♀ are of the normal white and black.

Geographical Range

Horaga species inhabit India (south and east from Himachal Pradesh), Ceylon, and East Pakistan, southwards through Malaysia and Vietnam to Formosa and New Guinea. The largest is confined to Formosa, one species is known only from the Philippines, and one only in Sulawesi. The remaining four species range wider. None is common, though they often favour open country.

In listing subspecies a west to east sequence will be followed.

Keys to the Species

A Key for the separation of the *Horaga* species by superficial characters is given below, followed by one based on the ♂ genitalia. These cannot be combined, aberrant tendencies from either aspect not always coupling with those from the other.

Key for the Visual Separation of *HORAGA* Species

(Pl. 1)

1 Underside with the normal generic pattern, the ochreous colouring similar on either side of the median band on both wings. Widely distributed 2

– Underside with the hind wing at least abnormal. Restricted distribution . . 5

2 Larger in each locality. Hind wing underside white band distinct. Upperside in most areas with much blue or violet. ♂ fore wing dorsum slightly bowed and an ochreous brand on the underside near the centre of vein 1 ; hind wing upperside with an obscure subcostal area of long brown hairs. Very variable seasonally outside the tropics, and geographically 3

– Smaller. Hind wing underside median band obsolescent, often leaving only the inner dark line. Upperside much less blue, often none. No ♂ insignia . . . 4

3 Usually slightly smaller, duller, and with more rounded wings in each locality. The underside white band broader on both wings, more abruptly dilated just below the fore wing costa to which it, or at least the dark line at its outer edge, usually extends . . . . . ***onyx***

– Slightly larger, brighter, the ♂ fore wing apex pointed and the termen straighter. Underside brighter, the fore wing white band not reaching above vein 7 and, in Malaya, Sumatra and Borneo, distinctly narrower and even . . . ***syrinx***

4 Upperside all or mostly dark brown, with the fore wing white patch extensive as usual and the violet areas normally very restricted. Underside with the fore wing white band dilated as usual, at least 3 mm. wide in space 3. Fore leg tibia plain, or at most one dark ring . . . . . ***albimacula***

– Upperside mostly violet, with regular dull brown borders; the fore wing discal spot reduced to seldom more than a bar at the cell-end, though the band may show through from below. Underside fore wing white band narrow, seldom over 1 mm. wide, and straight. Fore leg tibia, as in *onyx* and *syrinx*, with two dark rings between the dark joints . . . . . ***amethysta***

5 Underside with the fore wing normal and the hind wing normal up to the median band, beyond which are an irregular metallic green line and two black spots in spaces 2 and 6, followed by a broad area to the termen minutely mottled ash-grey and white. No blue on the upperside. Confined to Sulawesi . . . . . ***selina***

– Underside both wings abnormal 6

6 Upperside dark brown, usually with some sparse basal blue scales, and the fore wing white patch large, oblique, and shifted in to the centre of the wing. Underside chestnut brown with dark-edged white markings which differ slightly between the sexes; on the fore wing a costal streak from the base under vein 12 and a semicircular or subtriangular area based on the dorsum with apex at the cell-end; on the hind wing a subcostal streak from the base, and ovate spots at the cell-end (larger, triangular and filling the cell in the ♀), postdiscal across spaces 4 and 5 and at mid-costa (all conjoined in the ♀); two metallic green lines, one curving from the base below the cell to mid-vein 4, the other submarginal. Fore leg tibia mainly black. Male palpi translucent vaseline-yellow, and the hind wing with a prominent tuft of grey-brown hairs overlying the base of the cell. Confined to the Philippines ***lefebvrei***

– Upperside black; cilia of termen prominently white, an oblique white band on the fore wing from near mid-costa towards the tornus, and a rectangular shining violet subcostal area filling most of spaces 4 to 6 on the hind wing. Underside chalk-white; both wings with ochreous narrow cell-end bars and broader postdiscal and terminal bands, the last carrying on the hind wing a complete submarginal series of metallic green lunules and a large black tornal spot in space 2. Confined to Formosa . ***rarasana***

Key to the Differences in ♂ Genitalia *HORAGA*

(Pls. 2 and 3)

1 Conventional for the genus; right brachium or falx simple, curved; uncus lobes broadly triangular; valvae tapered, curved, and hirsute along ventral half of inner face 2

– Right brachium abnormal, compound; uncus lobes stunted; valvae less tapered, inner face more completely hirsute 5

2 Smaller, overall length excluding aedeagus under 2 mm., and not visibly affecting length of abdomen. Valvae basal half broad, distal taper more abrupt . . . 3

– Abdomen, as in all remaining species, noticeably elongate, genitalia length excluding aedeagus at least 3 mm. 4

3 Valvae basally truncate, distal third tapered to the tip and angled at about 30°; distal hairs and anterior spines clothing only the posterior half of the inner face; usually but not invariably with a distinct tooth mid-way along the ventral margin. Aedeagus stout (Pl. 2, fig. 18). . . . . ***onyx***

– Valvae basally of uniform width, distal quarter tapering and evenly curved through almost 90°; distal three-quarters of inner face hairy; ventral margin simple. Aedeagus slim. (cf. Fruhstorfer, 1912 : 232, fig. 3, from Java) (Pl. 2, fig. 19) ***syrinx***

4 Uncus lobes broad as in *onyx* and *syrinx*. Valvae not projecting beyond uncus; with a slight but even curve. (Pl. 2, fig. 20) . . . . . ***albimacula***

– Uncus lobes long and narrow. Valvae project well beyond end of uncus and are narrow, tapered, and distinctly sinuate (Pl. 3, fig. 21) . . . . . ***rarasana***

5 Right brachium ends in a disc. Uncus lobes small and ovate (Pl. 3, fig. 22) . . ***amethysta***

– Right brachium sharp-ended; equipped with a sub-basal projection. Uncus lobes stalked 6

6 Right brachium with the terminal half broadly bifurcate (Pl. 3, fig. 23) . . . ***selina***

– Right brachium centrally flattened and shouldered before a single terminal curled spike (Pl. 3, fig. 24) . . . . . ***lefebvrei***

Notes : (i) The valvae of five species are well illustrated to scale by Corbet (1941 : 49). That of *onyx* is one without the central tooth. Also shown with them, but reversed in aspect so concealing its allegiance to the Marmessini, is that of *achaja* Fruhstorfer.

(ii) Three illustrations are given in Corbet (1956 : pl. 16). These are not to scale, otherwise that of *albimacula* would be by far the largest on the plate.

(iii) Shirôzu (1960 : 311, 313, figs. 345, 346) gives admirable illustrations of *rarasana*, *albimacula* (as *anytus*), and *onyx* to scale. That of *onyx* shows the central tooth of the valva.

Horaga onyx

(Pl. 1, figs. 1–5 ; Pl. 2, fig. 18)

Though it has the greatest range in longitude, from N.W. India to South China and Formosa, this species is well surpassed in southern latitudes by *syrinx*. It is the common species in the north but becomes much rarer at the equator and does not extend beyond Sambawa and Borneo. Its full range on the Asian mainland will be interesting to ascertain. It would appear to have reached Formosa via Asia rather than the Philippines where it is not known, but neither has it been recorded between Thailand and Hongkong, nor from Hainan. In its northern, non-tropical races it has well-marked seasonal forms.

The anterior tail is very short in Ceylon specimens, intermediate in Indian ones, and thereafter normal.

The white band on the fore wing underside, or at least the dark posterior line edging it, reaches the costa, whereas in *syrinx* it does not. This feature, well known and reliable in Indian races, breaks down in specimens from Malaya, Sumatra and Borneo where the band becomes extremely narrow and even in *syrinx*, " sausage-shaped " in ♀♀ and linear in some ♂♂, while in *onyx* it is also narrowed but continues to be anteriorly dilated. Then in Java, as far south of the equator as Ceylon is north of it, the broad-banded features return to both species.

A series of seven *Horaga* ex coll. Rothschild taken by Hagen on the island of Banka in 1891 contained two *onyx* and four *syrinx* ♂♂ (confirmed by dissection) and cast an interesting light on the appearance of the two species there. They conform to the respective Sumatran subspecies.

H. onyx cingalensis Moore

Horaga cingalensis Moore, 1883 : 525. Ceylon.
H. onyx cingalensis Moore ; Fruhstorfer, 1912 : 232 ; 1914 : 35.

Figured by Woodhouse (1952 : 138, pl. 20, figs. 20, 21.)

This is quite the brightest of the *onyx* subspecies. The ♂ upperside is of a deep clear blue which fills most of the fore wing cell ; the fore wing apical border is black and tapers to a point at the tornus ; the white spot is clear, quadrate, comparatively small, and usually with some blue between it and the terminal border. The hind wing is blue up to the costal border above

vein 6, and out to the almost linear terminal border ; the white median band is faintly visible by transparency from below.

The ♀ upperside is duller, rather violet-blue, with a slightly larger white patch and broader, more diffuse, dark borders.

The underside is olive-brown as in *onyx* wet season form, with well-marked white bands and tornal black spots.

The size is average for the species ; fore wing length 13–16 mm.

South Indian and some North-West Indian specimens are intermediate between this and the next subspecies, having broader black borders but the same bright blue colour in the ♂.

B.M. (N.H.) ♂ Holotype, 31 ♂, 12 ♀, Ceylon ; 12 ♂, 23 ♀, S. India.

H. onyx onyx (Moore)

(Pl. 1, figs. 1, 2)

Thecla onyx Moore, 1857 : 30 as Boisduval M.S. " Moulmein ".
Horaga onyx (Moore) ; Moore, 1882 : 248. " Himalaya not Burmah."
H. onyx onyx (Moore) ; Fruhstorfer, 1912 : 232.
H. onyx onyx (Moore), f. *arta* Fruhstorfer, 1914 : 34. Assam.

Figured by Seitz in Vol. 1 (1908 : pl. 72, figs. c1, c2). In Vol. 9 (1926 : 981) he says these figures are of *cingalensis*, but they are much nearer *onyx*.

This is the type-species of the genus, and its senior taxon. Though the name had been current with various authors for at least ten years before 1857, Moore's was the first description.

Moore described his single specimen as " pale ferruginous brown " on the underside, and from " Moulmein—presented by the Trustees of the British Museum " to the East India Company Museum. The East India Company collection was returned to the B.M. (N.H.) in 1860.

In his subsequent amplification Moore said that the type specimen was a ♂, that the fore wing underside white band reached the costa, and that it was " now in the British Museum. Its locality label is Himalaya, not Burmah ".

The specimen standing as the type in the B.M. (N.H.) is a ♀, has a bright ochreous underside, a fore wing band ending far short of the costa, and a label reading " E. Indies ". It thus agrees neither in sex, colour, markings nor data with Moore's description. But a search through the main collection disclosed a ♂ agreeing well with the original description, labelled " Himalaya " and " E.I.C. 60–15 ". After careful rechecking I am satisfied that this is the true holotype of *Thecla onyx* Moore, and I have inserted it in the B.M. (N.H.) Type Collection, suitably labelled. The currently accepted nomenclature is not disturbed.

Both sexes of this well known subspecies are variable in size, colour and markings.

A valuable series of 28 ♂ and 11 ♀ from the Naga Hills, Assam, ex coll. Tytler, has full data labels and thus elucidates the pattern of the seasonal variation in this region, which is paralleled in other non-tropical areas. Four representative ♂♂ have been dissected and all have the dentate clasp.

The wet season form (f. *onyx* Moore) is larger (fore wing length 13–16 mm.), dark and well marked. The upperside is much darker and duller than *cingalensis* ; both wings usually have

broad terminal borders, with the blue dull and often suffused with violet ; the fore wing black costal border fills at least the anterior half of, and often all, the cell. The underside is comparatively dark olive brown, with bold markings.

The dry season form (f. *arta* Fruhstorfer) is smaller (fore wing length 12–14 mm.) and much paler, dull blue with narrower greyish borders and the white fore wing patch more extensive on the upperside. On the equally paler underside the outer halves of each wing become light grey, and the tornal spots are reduced to dots and yellow crowned.

B.M. (N.H.) ♂ Holotype, Himalaya ; 143 ♂, 99 ♀, North India (Kumaon–Sikkim), Assam (including the holotype of *arta* Fruhstorfer), Burma, Thailand.

H. onyx rana de Nicéville

Horaga rana de Nicéville, 1889 : 283, pl. 14, fig. 10. South Andaman Is.
H. ouyx [sic] *rana* de Nicéville ; Fruhstorfer, 1912 : 232.

This is a most distinct large race with intensely contrasted colouring above and below. It was also figured by Swinhoe (1911 : pl. 707, figs. 4, 4a, 4b). Fore wing length 15–17 mm.

The upperside is black, with the fore wing discal white spot smaller than usual (so reminiscent of mainland *syrinx* which is not recorded from these islands) ; the ♂ bears a dusting of bright blue over the greater portion of the hind wing and usually the dorsal area of the fore wing. The underside is rich dark chocolate-brown with broad white median bands, showing some seasonal variation, particularly in the intensity of the hind wing terminal markings.

B.M. (N.H.) 17 ♂, 15 ♀, Andaman Is. ; 1 ♂, Nicobar Is., 1 ♂, " Burma ".

H. onyx zuniga Fruhstorfer

B. [sic, for *H.*] *onyx zuniga* Fruhstorfer, 1912 : 233. Nias.
H. moulmeina zuniga Fruhstorfer ; Fruhstorfer, 1914 : 35.
H. onyx zuniga Fruhstorfer ; Corbet, 1941 : 49.

Figured by Seitz ; pl. 157, figs. i5, i6, ♂ ; i7, ♀.

This is another distinctive island race, but small and pale in very marked contrast to its neighbour *rana*.

The upperside is pale dull violet with narrow brown borders, the white bands visible from below by transparency ; the fore wing white patch is small and diffuse, and clear of the dull brown border. The underside is rather dark ochreous grey with clear white bands.

Fore wing length ♂ 13 mm., ♀ 14 mm.

B.M. (N.H.) ♂ Holotype, 6 ♂, 1 ♀, Nias Is.

H. onyx sardonyx Fruhstorfer

(Pl. 1, fig. 3 ; Pl. 2, fig. 18)

H. moulmeina sardonyx Fruhstorfer, 1914 : 33. N.E. Sumatra.
H. onyx sardonyx Fruhstorfer ; Corbet, 1941 : 49.

Not previously figured.

It has often been remarked that insect forms from Sumatra and Malaya, and to a lesser extent Borneo, are similar. This may be the case with *onyx*, but it seems so scarce in the area that there is insufficient material to decide whether the one subspecific name available can be applied to all. Provisionally I do so.

True N.E. Sumatran *sardonyx* is represented in B.M. (N.H.) by the three specimens mentioned by Fruhstorfer (l.c.), and also by de Nicéville & Martin (1896 : 479) who remarked " from Selesseh to Bekantschan (i.e. at 2,500 ft., between Medan and the Central Battak Mountains) . . . very rare, as Dr. Martin has not obtained more than 4 specimens in 13 years ".

The fore wing upperside has a very quadrate white patch set in a broad black apex and termen and resting on the inner half of vein 2, the black border running inwards under vein 2 to below the centre of the white patch ; the blue area internal to the border and the patch just enters the lower (dorsal) half of the cell. The hind wing costa above vein 6 is brown as usual, the remainder of the wing being basally blue shading evenly to a dull brown termen with the usual white submarginal and black marginal lines. The underside is dull ochreous grey ; the fore wing white band, though not extending above vein 7 with the dark line, is sharply widened below it, to measure 3 mm. at vein 3.

Two ♂♂ from Banka Island, over 600 miles away off S.E. Sumatra, are very similar, but the intervening and the western forms from this vast area seem to be entirely unknown.

A ♂ and ♀ from North Borneo are similar, but paler below with broader bands, that on the fore wing reaching the costa, while the upperside white patch is more diffuse and extends just below vein 2. There is no similarity between these two specimens and *corniculum* Druce (see under *syrinx maenala*).

The fore wing lengths of all the foregoing are ♂ 13, ♀ 15 mm.

Specimens from Singapore tend to be smaller (♂ 11–13, ♀ 13–14 mm.), darker, and with less extensive white markings (Pl. 1, fig. 3), but the anterior taper of the fore wing underside band is still marked and serves to distinguish them from *syrinx maenala* (Pl. 1, figs. 6, 9). These were taken flying in about equal numbers with *syrinx maenala*, often on the same day, in 1937–38 and 1952–53, and the series of each species include pairs taken *in cop.*

B.M. (N.H.) ♂ Holotype, 2 ♂, N.E. Sumatra ; 2 ♂, Banka (*Hagen*) ; 4 ♂, 1 ♀, Singapore (*Cowan*), 1 ♂, 1 ♀, N. Borneo.

H. onyx fruhstorferi Corbet

(Pl. 1, fig. 4)

H. onyx fruhstorferi Corbet, 1941 : 50. Central Java.

As is the case with *syrinx*, the transit to Java results in reduction of black colour and extension of blue and white. The appearance is very reminiscent of the Ceylon race.

Despite the large series of *syrinx onychina* from Java in B.M. (N.H.), there is only the unique specimen of *onyx fruhstorferi*. The latter is much smaller (fore wing length 13 mm.), with broader black borders (but not so broad as in *sardonyx*), and

the blue areas slightly tinged with violet. The fore wing white patch extends well below vein 2.

B.M. (N.H.) ♂ Holotype, Central Java, 1,500 ft.

H. onyx akronyx subsp. n.

(Pl. 1, fig. 5)

The name is taken from the Greek *ακρον* = furthermost, though *ἀκρονυξ* = tip of fingernail. Sambawa marks the southern known limit of the species.

Matching *fruhstorferi* in size, *akronyx* ♂ has a distinctly more pointed apex and straighter termen to the fore wing.

The upperside blue colour is brighter and the white patch ovate rather than quadrate, while the black borders are more restricted ; a white submarginal line appears at the fore wing tornus. The holotype ♂ has a small black wedge anterior to the white patch at the base of vein 2 which is lacking in the paratypes.

The underside is as in *fruhstorferi* but with slightly narrower white median bands.

The ♀ is similar to the ♂ but larger (fore wing 15 mm. against 13–14 mm.), paler, and with more diffuse white markings.

B.M. (N.H.) ♂ Holotype, ♀ Allotype, and 2 ♂ Paratypes, Sambawa (*Doherty*, September 1891).

H. onyx moltrechti Matsumura

Horaga moltrechti Matsumura, 1919 : 604, pl. 47, fig. 9. Formosa.
Horaga asakurai Nire, 1920 : 376. Formosa (Pulisha or Horisha).
H. onyx moltrechti Matsumura [syn. *asakurai* Nire] ; Shirôzu, 1960 : 312, 313, fig. 346 ; pl. 67, figs. 715–718.

Shirôzu's figure of the ♂ valva and illustrations of the insects are excellent. I have followed his synonymy.

Matsumura and Nire attribute the name *moltrechti* to Oberthür but no justification for this can be found.

This subspecies is probably as variable seasonally on the Asian mainland as *onyx* from India, but the specimens available all approach the dry season form, compared with which the ♂ is generally larger and of a richer blue and less black on the upperside, while the underside is pale grey with obsolescent white bands and tornal black dots. The ♀ is heavily black-dusted above, and ochreous brown below. Fore wing length 14—17 mm.

B.M. (N.H.) 2 ♂, Hongkong ; 1 ♂, 2 ♀, Formosa.

Horaga syrinx

(Pl. 1, figs. 6–9 ; Pl. 2, fig. 19)

Though not known west of Sikkim nor north-east of the southern Philippines, this species ranges far south to New Guinea. It is the only species which is known to straddle both Wallace's and Weber's Lines, and it shows interesting reactions to

each which may be anticipated in other species. It also has a very distinctive appearance in the " Neomalayan " area of Sumatra–Malaya–Borneo.

It is sometimes very close to *onyx* in appearance, but can usually be identified by its slightly larger size, a more pointed fore wing with straighter termen, and brighter, more distinct, markings. The ♂ genitalia are as small as those of *onyx*, and it has the same short abdomen.

H. syrinx sikkima Moore

Horaga sikkima Moore, 1883 : 525. Darjiling.
H. moulmeina sikkima Moore ; Fruhstorfer, 1914 : 35.
H. syrinx sikkima Moore ; Corbet, 1941 : 50.

Nowhere well illustrated.

The description of this subspecies immediately follows that of *moulmeina*, of which it has often been made a synonym. It appears sufficiently distinct, with a fair amount of seasonal variation parallel to, but less pronounced than, that of *onyx*.

It is large (fore wing length 15–18 mm.), robust and dark. On the ♂ upperside the black fore wing borders fill the cell and the outer quarters of spaces 1 ; often the base is black, leaving only a small subdorsal area of dark blue ; the white patch is nearly as large as in *onyx* but crossed by black veins which give it a granular appearance ; the hind wing costal border is broad and the terminal diffuse, leaving a discal area of dark blue more or less crossed by black veins. The ♀ is duller overall, with the white patch diffuse. The underside is bright ochreous yellow, and the fore wing white median band is strongly dilated centrally.

B.M. (N.H.) Holotype, Darjiling ; 17 ♂, 12 ♀, Sikkim, Bhutan, Assam.

H. syrinx moulmeina Moore

Horaga moulmeina Moore, 1883 : 525. Moulmein.
H. onyx moulmeina Moore ; Fruhstorfer, 1912 : 232.
H. moulmeina moulmeina Moore ; Fruhstorfer, 1914 : 35.
H. syrinx moulmeina Moore ; Corbet, 1941 : 50.

Nowhere well illustrated, this subspecies is transitional to the Malayan one. It is smaller than *sikkima* (fore wing length 14–16 mm.) ; the upperside white patch is more compact, seldom showing in the cell nor below vein 2 in the ♂ ; the blue areas are brighter and more extensive, usually filling the fore wing base and reaching the hind wing termen, where the border is replaced by some black marginal spots in spaces 2 to 5. The underside is distinctly darker ochreous and the median bands narrower.

B.M. (N.H.) ♂ Holotype, Moulmein ; 4 ♂, S. Burma to Mergui. The specimen reported by Godfrey (1930 : 346) under *H. halba* from Renong (S. Thailand) is probably this.

H. syrinx artontes Fruhstorfer

(Pl. 1, fig. 7)

Horaga affinis artontes Fruhstorfer, 1912 : 233. Nias Is.
H. syrinx artontes Fruhstorfer ; Corbet, 1941 : 50.

Not previously illustrated.

This remarkable race does not follow the trend of *onyx zuniga*, but is large and silvery, like species of *Marmessus* in this remote island. The unique ♂ specimen is as large as any from Neomalaya (fore wing length 17 mm.). The upperside is pale shining grey-blue with very narrow dark grey borders ; the white spot is small and narrow, edged with black and well clear of the border ; the hind wing white median band shows through from below, and the terminal white and black lines and white cilia are very prominent.

The underside is normal, the ground colour being rather dark brownish ochreous.

B.M. (N.H.) ♂ Holotype, Nias (no further data).

H. syrinx maenala (Hewitson)

(Pl. 1, figs. 6, 9)

Myrina maenala Hewitson, 1869 : Suppl. 7, pl. 3, figs. 85, 86. Borneo.
Horaga halba Distant, 1886 : 460, pl. 44, fig. 23. Penang (♀). **syn. n.**
Horaga corniculum H. H. Druce, 1895 : 611, pl. 34, fig. 8. Kina Balu. **syn. n.**
Horaga affinis H. H. Druce, 1895 : 611, pl. 34, fig. 9. Kina Balu and Labuan.
H. onyx corniculum Druce ; Fruhstorfer, 1912 : 232.
H. affinis affinis Druce ; Fruhstorfer, 1912 : 233.
H. moulmeina (?) *corniculum* Druce ; Fruhstorfer, 1914 : 35.
H. moulmeina halba Distant ; Fruhstorfer, 1914 : 35.
H. maenala (Hewitson) ; Seitz, 1926 : 982.
H. onyx halba Distant ; Corbet, 1941 : 49.
H. onyx corniculum Druce ; Corbet, 1941 : 49.
H. syrinx maenala (Hewitson) ; Corbet, 1941 : 50.
H. syrinx affinis Druce ; Corbet, 1941 : 50.

The authors' illustrations quoted above are good. Seitz copies those of *corniculum* (pl. 147, figs. b8, c1) and *affinis* (pl. 147, figs. c2), but not very clearly.

The appearance of *onyx sardonyx* throughout the Neomalayan area (Sumatra–Malaya–Borneo), and its differentiation from *syrinx maenala*, have already been discussed, and my illustrations on Pl. 1 are designed to illustrate the Malayan forms of both in Singapore. The latter species also presents a fairly homogeneous, but variable appearance in the area. Its distinctive characteristics are the dark pointed fore wing of the ♂, and the greatly reduced white markings—more so than in *onyx*—of both sexes.

The variability and lack of material combined to confuse the nomenclature. The three names given to individual Bornean specimens respectively denote the two distinctive extreme ♂ forms, and the normal one (*maenala*, with an obsolete white patch, the unique *corniculum* with a large one, and the intermediate *affinis*). Distant's figure of *halba*, a ♀ from Penang with the narrow even fore wing median band, suggested synonymy with form *affinis*, and this was confirmed by the accidental discovery of the holotype (Cowan, 1966).

The normal form is not far from *moulmeina*, but even smaller (fore wing length ♂ 13–15, ♀ 13–16 mm.), and distinctly darker. The ♂ upperside is bright shining blue with the apical half of the fore wing quite black and the white spot very small, sullied, and black-veined. The white spot in the ♀ is clear, but inwardly black-edged.

The name *affinis* has on occasion been wrongly accredited to Staudinger.

The B.M. (N.H.) series are subdivided for clarity :

f. *maenala* ♂ Holotype, Borneo. 1 ♂, Langkawi Is. (*Stubbs*).

f. *affinis* 1 ♀, Langkawi Is. (*Miller*). 4 ♂, 5 ♀, Penang (*Kerr*, ♀ Holotype of *halba* Dist. ; *Adams, Lakatt and Pambu*). 2 ♂, 1 ♀, Malaya. 2 ♂, 2 ♀, Singapore (*Cowan*, includes pair taken *in cop.*). 2 ♀, N.E. Sumatra ; Selesseh and Bekantschan (*Martin*). (These do not pair off with the 3 ♂ *sardonyx* already discussed). 4 ♂, 1 ♀, Banka (*Hagen*). 11 ♂, 2 ♀, Borneo ; Kina Balu and Brunei.

H. syrinx onychina (Staudinger)

Sithon onychina Staudinger, 1889 : 113. Java.
Horaga holothura Swinhoe, 1894 : 430. E. Java ; Malang. **syn. n.**
H. onyx holothura Swinhoe ; Fruhstorfer, 1912 : 232, " probably W. Java ".
H. onyx onychina (Staudinger) ; Fruhstorfer, 1912 : 232. E. Java.
H. moulmeina holothura Swinhoe ; Fruhstorfer, 1914 : 35. W. Java.
H. moulmeina onychina (Staudinger) ; Fruhstorfer, 1914 : 35. E. Java.
H. syrinx onychina (Staudinger) ; Corbet, 1941 : 50. Java.
H. syrinx holothura Swinhoe ; Corbet, 1941 : 50. E. Java.

Well illustrated by Seitz (pl. 157, figs. i2 ♂, i3, i4 ♀) ; also, but surprisingly poorly, by Piepers & Snellen (1918 : 103, pl. 27, figs. 164a, b). The misspelling *holothuria* has often occurred.

Fruhstorfer and others believed that different subspecies fly in East and in West Java. I cannot find this proved for our group of Lycaenidae. There is some variation in *H. syrinx* here, but Kalis (1933 : 85–86) investigated the parallel but even more pronounced case of *Marmessus ravindra* Horsfield in the island and found that variation was seasonal rather than geographic ; that a large race flew throughout the island, with smaller individuals in part of the year in the eastern portion.

In the several long series of the species in the B.M. (N.H.), including Fruhstorfer's, many with coloured labels for East, West and Mid-Java, no seasonal data are given, and locality seems to have no influence on appearance.

High mountains and volcanoes are evenly distributed throughout the island, so are unlikely to affect the issue.

Staudinger referred to the " magnificent " large form in his description, as did Swinhoe when describing his four specimens from Malang as " expanse 1·4 inches " (equivalent to fore wing length over 18 mm.). Swinhoe's type specimen, however, is definitely small, with fore wing length only 15 mm.

I regard the Javan subspecies of *H. syrinx* as *onychina* Staudinger, with synonym *holothura* Swinhoe, which name cannot be applied to West Javan specimens but there may be a case for using it as a seasonal form name in East Java.

The normal form throughout the island is in the ♂ brilliant bright blue with the inner edge of the very narrow apical border semicircular from base to tornus on the fore wing, and the white discal patch large, diffuse and ovate. The ♀ upperside is similar, but the blue areas are strongly tinted with violet and the hind wing white band shows through from below. The median bands on the underside are complete and very broad. Fore wing length is 15–17 mm.

B.M. (N.H.) 68 ♂, 19 ♀, West, Central and East Java (including the ♂ holotype of *holothura* from E. Java).

H. syrinx privigna Fruhstorfer **stat. n.**

Horaga privigna Fruhstorfer, 1897 : 7, 113. Lombok.
H. onyx privigna Fruhstorfer ; Fruhstorfer, 1912 : 232.
H. moulmeina privigna Fruhstorfer ; Fruhstorfer, 1914 : 35.

Nowhere illustrated. Described from a single ♀.

This subspecies is very similar to Javan specimens ; fore wing length 17 mm. The white discal patch on the upperside is slightly smaller, compressed by the broader dark borders, which are also wide on the hind wing. The fore wing underside white band was correctly described as longer and narrower than in Java, reaching the costa, but Seitz (p. 982) transposed this to short and broad.

Bali ♀♀ are similar to *privigna* on the upperside but have the broad band below like Javan ones.

B.M. (N.H.) ♀ Holotype, Lombok ; 3 ♀, Bali.

H. syrinx decolor (Staudinger) **stat. n.**

Sithon onyx var. *decolor* Staudinger, 1889 : 112. Palawan.
H. onyx decolor (Staudinger, 1898 [sic]) Fruhstorfer, 1912 : 232.
H. moulmeina decolor (Staudinger) ; Fruhstorfer, 1914 : 35.

Nowhere illustrated. Described by comparing it with " *onyx* Moore from Sikkim and Amboina ".

The upperside blue is very much reduced, particularly in the ♂. The underside is deep olive yellow, the hind wing with a series of black terminal spots above the tornal ones. Probably quite close to *paulla* (see below). Fore wing length 17 mm. (♀).

B.M. (N.H.) 1 ♀, Palawan.

H. syrinx joloana Fruhstorfer **stat. n.**

Horaga onyx joloana Fruhstorfer, 1912 : 232. Jolo Is.
H. moulmeina joloana Fruhstorfer ; Fruhstorfer, 1914 : 35.

Nowhere illustrated. Probably very like the next subspecies, *paulla.*

Fruhstorfer's brief description of this race is that it differs from *decolor* in being more violet-blue above, with the fore wing white spot larger.

H. syrinx paulla Fruhstorfer **stat. n.**

Horaga onyx paullus Fruhstorfer, 1912 : 232. Bazilan Is.
H. moulmeina paullus Fruhstorfer ; Fruhstorfer, 1914 : 35.

Nowhere illustrated. The holotype was so small that a dissection was made to prove its species. It is a good *syrinx* (Pl. 2, fig. 19). The fore wing length is 13 mm.

Translating Frustorfer's original description :

> " Smaller than *decolor* (Seitz wrongly says ' larger '), upperside darker blue with very wide black apical border ; a large rather quadrate clear white discal patch ; below greenish yellow with a light brown apical wash and the white median band broken in the centre, its hind portion suffused with greenish."

As this and the two preceding subspecies are so little known and perfunctorily described, and since their territory is a nodal one between those of Borneo westwards so far discussed, those of the Philippines, and those ranging south and east through Celebes and Halmahera, a fuller description of this key specimen is given. The possibility of its being a chance dwarf should be borne in mind.

The fore wing above is black, with a shining blue dark-dusted area confined to a semicircle with diameter on the basal half of the dorsum, and barely entering the cell ; the white discal patch being clearly defined on the black ground, 2½ mm. wide by 3½ mm. along its straight inner edge which lies obliquely from the origin of vein 5 to below vein 2. The hind wing is black with some blue dusting in the cell and just beyond, a prominent white anteterminal line, black terminal line, and white cilia. The tails are normal.

The rich ochreous brown underside has some postdiscal dark grey shading external to the white fore wing band which is short and broad, measuring as on the upperside ; the hind wing band is narrow and broken in the centre ; above the tornal black spot in space 2 are three well defined submarginal black spots crowned with white lunules at the ends of spaces 3, 4, and 5 ; the normal tornal metallic green scaling runs into space 3.

B.M. (N.H.) ♂ Holotype, Basilan (*Doherty*, February/March 1898).

H. syrinx camiguina Semper **stat. n.**

Myrina ciniata Hewitson ♀ var. Mindanao ; Hewitson, 1869 : Suppl. 6, pl. 3, fig. 84.
Horaga camiguina Semper, 1890 : 216. Camiguin Is.
H. ciniata camiguina Semper ; Fruhstorfer, 1912 : 233.

There are two Camiguin Is. (at least). One is just north of Luzon. This one is just north of Mindanao.

Semper described this subspecies by comparing it with Hewitson's 1869 figure of the underside of his ♀ variety from Mindanao of *ciniata*. His two ♀♀ differed in having a larger, unmarked, almost semicircular white spot on the fore wing upperside (for which he must have used Hewitson's 1863 fig. 31 on pl. 14), and a narrower, more regular white median band on the hind wing underside.

The fore wing length is given as 15 mm. which, though compatible with the ♂ *syrinx paulla*, is small for other ♀♀ in the region.

Till further material of both sexes is available this name must stand for Mindanao specimens as well.

The name has on occasion been misspelt *caminguina*.

H. syrinx permagna Fruhstorfer

Horaga ciniata permagna Fruhstorfer, 1912 : 233. Toli Toli, N.W. Celebes.
H. syrinx permagna Fruhstorfer ; Corbet, 1941 : 50.
(" *Myrina ciniata* ♂ " Hewitson, 1869 : Suppl. 6) (no loc.).

Figured by Seitz : pl. 158, fig. a3 (♀ nec ♂ ?).

Fruhstorfer described *permagna* by comparing it with " *ciniata* Hew. ; type from South Celebes ", than which it was larger and with wider white markings above and below. He did not indicate its sex, but his description, and Seitz' illustration in particular, fit a ♀.

There are two ♂♂ in B.M. (N.H.), one ex colls. Boisduval and Rothschild labelled " Celebes ", the other ex coll. Hewitson labelled " Celeb." and, in a later hand, " Calabar ". The latter stood as the type of *ciniata* Hew., an untenable position (q.v. below) but one which had apparently misled Fruhstorfer and others. The two are identical and, with a fore wing length of 18 mm., a good match for the ♀ *permagna*, which name I apply to cover all Celebes until further material is obtained from different parts of this vast and interesting complex of peninsulae.

Wallace (1869 : i, 280) noted that Celebes insect races, particularly in butterflies, have exceptionally large and elongate pointed forewings. This feature is apparent in these two ♂♂.

There is no blue on the upperside of this subspecies, which is intense black in the ♂, less intense in the ♀, with a comparatively small but clear white fore wing patch ; the hind wing has some pale shading at the cell-end and mid-costa. The underside is marked with terminal spotting on the hindwing as in *paulla*.

B.M. (N.H.) 2 ♂, Celebes ; 2 ♀, Palos Bay, W. Celebes (*Doherty*).

H. syrinx samoena Grose Smith **stat. n.**

Horaga samoena Grose Smith, 1895 : 513. Batchian (♀ nec ♂).

Grose Smith described under this name a very small ♂ (fore wing length 14 mm.) and three ♀♀ (17–18 mm.). His two type specimens and the two syntypes (no actual holotype having been designated) are in the B.M. (N.H.). The discrepancy in size is significant ; the ♀♀ are compatible with *syrinx* but the ♂, which has no sexual insignia, is not, and I bracket it with and discuss it later under *ciniata* for reasons there given.

I select from his two types the ♀ as the LECTOTYPE of *samoena* Grose Smith. His description is accurate. The upperside is dark brown, unmarked except for the oblique white patch which is ovate, sullied, and crossed by two dark veins, and the dull whitish submarginal line on the hind wing. The underside is normal for the species, with the inclusion of the diminishing series of subterminal black dots, each with white lunule, at the ends of spaces 2 to 6 of the hind wing.

The fore wing length is 18 mm. In size and markings it closely resembles Seitz' figures for *permagna* upperside (1926 : pl. 158, fig. a3) except that the white patch is small and dusky ; and for *ciniata* underside (l.c., fig. a2) except for its greater size.

A fourth ♀ taken by Waterstradt has rather wider and clear white markings but is otherwise similar.

B.M. (N.H.) ♀ Lectotype and 1 ♀, Batchian (*Doherty*, March 1892). 1 ♀, Halmahera (*Doherty*, August 1892). 1 ♀, Batchian (*Waterstradt*).

H. syrinx syrinx (Felder)

Myrina syrinx C. Felder, 1860 : 452. Amboina.
M. onyx Moore ; syn. *syrinx* Felder ; Hewitson, 1865 : 40, line 3.
H. syrinx (Felder) Moore, 1883 : 525. " confined to Amboina ".
H. syrinx (Felder) ; Fruhstorfer, 1897 : 115.
H. syrinx syrinx (Felder) ; Corbet, 1941 : 50.

These are the only references to this name, and it has not been illustrated.

♂ upperside lustrous bright blue with a purple sheen ; the fore wing costa and outer third, hind wing costa and inner margin all black ; the fore wing discal white patch large and clear ; a hind wing subterminal row of black dots followed by the white and the black marginal lines prominent before the white cilia ; traces of the white median band are visible on the hind wing from below, and the lobe is marked with blue metallic scales.

♀ upperside dark brown, *the wing bases suffused with pale purple-blue which may reach the hind wing termen ;* the fore wings with a shortened discal band. Underside ochreous with a white discal band on all wings ; the hind wings with four terminal black spots inwardly edged with shining blue.

The description of the ♂ upperside is from a Ceram specimen in good condition. That of the ♀ and the underside is translated from Felder's with my addition in italics, and agrees with ♀ specimens before me. He called the white patch on the fore wing upperside " *abbreviata* " because there were at the time no comparable species known ; as a discal band in the normal sense it is short, but compared with the allied species we now know the patch is long, from vein 1 to the upper apex of the cell.

Felder's type specimen, so marked ex coll. Rothschild, survives in very battered condition with three wings parts of which are transparent, but traces of the blue colour are left. The abdomen attached to her looked strange and, on dissection, proved to be that of a totally unrelated ♂. This specimen has only recently been found, but it proves that Corbet was correct in his diagnosis of the taxon, and corroborates his remark on the omission of any reference to the blue colour by Felder. Further evidence that blue was present may be adduced from Hewitson's rejection of *syrinx* as being a synonym of *onyx* Moore. This was an unwarranted confusion of localities which Moore tried to rectify jointly with the similar error in the case of *ciniata* Hewitson, when he averred that *syrinx* Felder was confined to Amboina and *ciniata* to Batchian. These two valid corrections unfortunately remained overlooked.

B.M. (N.H.) ♀ Holotype, Amboina. 1 ♀, Amboina (*Doleschall & Martin*, 1891 ; ex colls. Van der Poll and Adams). 1 ♂, 5 ♀, Central Ceram (*C.F. & J. Pratt*, 1919).

H. syrinx schoutensis Joicey & Talbot **stat. n.**

(Pl. 1, fig. 8)

Horaga schoutensis Joicey & Talbot, 1916 : 79. Schouten Is.
H. onyx schoutensis Joicey & Talbot ; Seitz, 1926 : 982.

Here illustrated for the first time. The Schouten Islands referred to are those off north-western, not central, New Guinea.

This is an interesting extension of the species, apparently well established and widespread. The size (fore wing length 16–18 mm.) and ♂ genitalia entirely conform to the *syrinx* stamp.

The ♂ upperside is black, with the white patch semicircular and large ; the basal half of the dorsum is pale shining blue, which colour reappears diffusely and to a variable extent in the hind wing cell. The ♀ is duller ; dark grey with more white and little blue.

The underside is ash-grey, slightly ochreous at the hind wing tornus, and the white median bands broad and outwardly diffuse.

B.M. (N.H.) ♂ Holotype, Biak Is. (*A.C. & F. Pratt*, June 1914, labelled "*schoutensae*"). 5 ♂, 1 ♀, Roon Is. (*C.F. & J. Pratt*, July 1920). 1 ♂, Ron Is. (*Doherty*, July 1897). 1 ♂, Dorey (*Doherty*, April 1897). 2 ♂, Mefor Is. (*Doherty*, June 1897 ; *C.F. & J. Pratt*, August 1920—the specimen illustrated). 1 ♀, Ambabaki (*Laglaise*). 1 ♂, 1 ♀, Hydrographer Mts. (*Eichhorn* Bros., April 1918).

Note : these localities are, from west to east :

Ambabaki ; central on the north-facing coast of the N.W. peninsula of New Guinea at Lat. ½° S., Long. 133° E.
Dorey ; Manokwari, just south of Cape Manori ; 1° S., 134° E.
Mefor Is. ; west entrance to Great Geelvink Bay ; 1° S., 135° E.
Ron, = Roon Is. ; } S.W. quarter of Great Geelvink Bay ; 2½° S., 134½° E.
Biak Is. ; east entrance to Great Geelvink Bay ; 1° S., 136° E.
Hydrographer Mts. ; over 1,000 miles away in Papua ; 9° S., 148½° E.

Horaga albimacula

(Pl. 1, figs. 11, 12 ; Pl. 2, fig. 20)

Save that it has not yet been recorded from Sumatra and Nias, this little species is known so far from all the territory of *onyx*, and from all that of *syrinx* except south-east from Borneo, in which island it seems very rare. This is a new concept of the range of the species ; it has only recently been recognized that it has a subspecies in Ceylon and India, and it is now extended to Bali, Celebes, the Philippine area and Formosa.

The wings appear comparatively narrower than those of *onyx* and *syrinx*, and less rounded than in *amethysta*. On the hind wing underside the white band is obsolescent, leaving usually only the dark median line which, as in *amethysta*, is prominent and often heavily overlaid with metallic green scales. The upperside

is normally very dark brown, but some subspecies are blue or purple-blue and a few are interesting in having occasional purple-blue forms. The white patch on the fore wing upperside is always prominent.

It is possible but unlikely that *albimacula* might have to give way to *ciniata* as the specific name for a senior subspecies in Batchian. This is discussed later.

The species is remarkable in having so many races described from unique specimens. I add two more, in Bali and Celebes.

H. albimacula viola Moore

Horaga viola Moore, 1882 : 248. Dharmsala (Kangra, N. India).
H. albimacula viola Moore ; Woodhouse, 1952 : 138, pl. 20, fig. 22.

Illustrated by most authors on Indian species.

The sexes are alike, though the ♀ occasionally has traces of purple-blue basal scaling on the upperside. This is very dark brown, and the usual white fore wing patch is sometimes suffused with pale orange. The underside ground colour is dark ochreous brown.

The size is variable ; fore wing length 10½–14 mm. (9 mm. in some very small ♂♂).

There are three specimens labelled types in the B.M. (N.H.) Type Collection ; (1) a brown ♂ labelled " Sikkim 1886, O. Möller.", ex coll. Elwes ; (2) a brown ♀ labelled " Horaga viola ♂ Type, Moore " and " Kangra " (this is bodyless but I diagnose sex by size and wing profile) ; and (3) a blue ♀ labelled as last but " ♀ Type ". The first by its date and locality cannot be a Type ; Moore's description gave " Dharmsala ; type in B.M.", Dharmsala being in Kangra. The second and third agree with the original description of the respective sexes, the former is a *viola* as currently recognized and the latter an *onyx*, and both are ♀♀. I now select the second of the three, the specimen labelled and described by Moore as *Horaga viola* ♂, to be the LECTOTYPE ♀ of *Horaga viola* Moore (1882 : 248). It agrees with my description above, having no trace of blue colour on the upperside. The current nomenclature is not disturbed.

B.M. (N.H.) ♀ Lectotype, Kangra ; 29 ♂, 9 ♀, S. India, Sikkim, Assam, Burma ; (also known from Ceylon).

H. albimacula albimacula (Wood-Mason & de Nicéville)

Sithon albimacula Wood-Mason & de Nicéville, 1881 : 249. Andamans.
Horaga albimacula (Wood-Mason & de Nicéville) ; de Nicéville, 1889 : 284, pl. 14, fig. 9.
H. albimacula albimacula (Wood-Mason & de Nicéville) ; Corbet, 1941 : 48.

The illustration quoted is good, and well shows how this very dark and richly marked subspecies faithfully repeats the features of its compatriot *onyx rana*, figured with it.

The upperside is black with a large white patch, and the centre and disc of the hind wing are deep shining violet, leaving a regular terminal border. The underside ground colour is rich deep brown.

The fore wing length is 10–12 mm.

B.M. (N.H.) 9 ♂, 1 ♀, Andaman Is.

H. albimacula malaya Corbet

Horaga albimacula malaya Corbet, 1941 : 48. Singapore.

Nowhere illustrated, this subspecies is very similar to *viola* but in both sexes all wings are often heavily sprinkled in the basal areas with purple-blue scales, and the white fore wing patch is slightly narrower. The fore wing length is 11–12 mm.

Described from Singapore, it flies there with *onyx sardonyx* and *syrinx maenala*, and is also known from peninsular Malaya.

B.M. (N.H.) ♂ Holotype, ♀ Allotype, Singapore, and 2 ♂, Singapore (*Cowan*), one with and one without blue scaling.

H. albimacula anara Fruhstorfer **stat. n.**

Horaga anara Fruhstorfer, 1898 : 180. East Java.
H. anytus anara Fruhstorfer ; Seitz, 1926 : 982, 1116, pl. 157, fig. i9.

Seitz' figure is good. Also illustrated (as *anytus*) by Piepers & Snellen (1918 : 103, pl. 27, fig. 165).

This race is very like *viola* but paler below, and the fore wing white areas on both surfaces are wider. Small ; fore wing length 11 mm.

B.M. (N.H.) ♂ Holotype, Lawang, East Java.

H. albimacula violetta **subsp. n.**

(Pl. 1, fig. 12 ; Pl. 2, fig. 20)

This is a surprising and very distinct specimen from Bali. It is large for the species ; fore wing length 14 mm.

The ♂ upperside is pale violet-blue of a powdery appearance ; the dark brown costal border almost fills the fore wing cell, continuing round the apex to form terminal borders 2 mm. wide on both wings ; the white fore wing patch is large and semicircular. The underside is exactly as in *viola* except for the much wider fore wing band.

B.M. (N.H.) ♂ Holotype, Bali (low country, *Doherty*, April 1896).

H. albimacula bellula Fruhstorfer **stat. n.**

Horaga bellula Fruhstorfer, 1897 : 114. Sambawa.
H. anytus bellula Fruhstorfer ; Fruhstorfer, 1912 : 233.

Figured by Seitz : pl. 158, fig. a8 (underside).

This is a reversion to the black and white *viola* pattern, very like *anara* from Java but darker below and with less extensive white areas. Fore wing length 12 mm.

H. albimacula chalcedonyx Fruhstorfer

Horaga chalcedonyx Fruhstorfer, 1914 : 33. " Sintang, S.W. Borneo ".
Horaga onyxitis Fruhstorfer (1914 : 34). " Sintang, W. Borneo ". **stat. & syn. n.**
H. moulmeina chalcedonyx Fruhstorfer ; Fruhstorfer, 1914 : 35.
H. onyx chalcedonyx Fruhstorfer ; Seitz, 1927 : 1116.
H. anytus onyxitis Fruhstorfer ; Seitz, 1927 : 1116, pl. 157, fig. i8.
H. albimacula (?) *chalcedonyx* Fruhstorfer ; Corbet, 1941 : 49.

The figure by Seitz is of the male upperside.

Fruhstorfer described *chalcedonyx*, immediately followed by *onyxitis*, both from " one male in coll. Fruhstorfer " and from the same locality. The type specimen of *chalcedonyx*, ex coll. Fruhstorfer and with his labels on, agreeing with his description, is in the B.M. (N.H.) and is a ♀. It is very slightly larger and with a little more blue than, but otherwise identical with, the ♀ allotype of *malaya* from Singapore, and it is clear that *chalcedonyx* is the West Borneo coastal subspecies of *albimacula*. Seitz' figure and Fruhstorfer's description of *onyxitis* can only refer to the ♂ of this subspecies, showing it to be intermediate between *malaya* and *violetta*, having a black and white fore wing upperside and a " dark violet-blue hind wing with a moderately broad black border which tapers somewhat tornally " (translated from Fruhstorfer).

Fruhstorfer himself surmised that this would prove a race of *albimacula* (= *anytus*). It differs remarkably from the next, from montane North Borneo, which has no blue.

B.M. (N.H.) ♀ Holotype ; Sintang, West Borneo.

H. albimacula albistigmata Moulton

Horaga albistigmata Moulton, 1912 : 159. Sarawak.
H. albimacula albistigmata Moulton ; Corbet, 1941 : 49.

Nowhere illustrated, this subspecies is in all respects like a small dark *viola* except that the fore wing white spot is smaller on both surfaces. The fore wing length is 10½ mm.

B.M. (N.H.) ♂ Holotype ; Madihit Hills, East Sarawak (May 1911).

H. albimacula anytus (Staudinger) **stat. n.**

Sithon anytus Staudinger, 1889 : 113, pl. 1, fig. 12. Palawan.

Yet another unique specimen named ; this time figured by the author by photograph, leaving no doubt as to its status.

The upperside is black and white as in *viola*, *anara* and *albistigmata*, with the white patch small as in the last. It differs from all these, and follows the generic trend in the area, by bearing a terminal series of black spots on the hind wing underside.

The fore wing length is 11 mm.

H. albimacula taweya **subsp. n.**

(Pl. 1, fig. 11)

Another large new subspecies. The unique ♂ lay in the series, very similar on the upperside, of *H. selina*, and was caught with it at Taweya by Doherty on his last visit to Celebes.

The ♂ upperside is brownish black, unmarked except for the fore wing white patch and the indistinct whitish submarginal line on the hind wing; the white patch is large, the outer edge semicircular and diffuse, the inner upright not oblique, running straight from the upper apex of the cell to just beyond the centre of vein 1.

The underside is ochreous brown, only slightly darker than in *violetta* (my illustration is too dark), with the fore wing white band as on the upperside; the band on the hind wing is obsolescent as usual and the inner dark brown median line is edged outwardly with metallic green scales along its posterior half; similar green scales crown the series of black spots which, as in *anytus* and the Celebes race *syrinx permagna*, decrease along the termen from the large one in space 2 to the indistinct one in space 6.

The fore wing length is 14 mm.

B.M. (N.H.) ♂ Holotype, " Taweya, north of Palos Bay ", Celebes west coast (*Doherty*, August–September 1896).

H. albimacula bilineata Semper **stat. n.**

Horaga bilineata Semper, 1890 : 216. " Panaon, S.E. Mindanao ".

Nowhere figured. Described, like his *camiguina*, from two ♀♀, which are distinctly smaller ; fore wing length 13–14 mm.

The upperside is dark brownish grey with a comparatively large white patch. The underside is " ash-grey ", slightly darker at the fore wing apex ; the median band wide on the fore wing and nearly obsolete on the hind, where it is edged darker on both sides and marked with metallic green scales throughout its length ; similar scales crowning the full series of terminal spots.

I cannot find " Panaon, S.E. Mindanao " on the map. There is an island of that name off N.E. Mindanao, between it and Leyte, which Semper mentions in his appendix under " Fünfter Bezirk " (p. 363), Mindanao itself being in his " Sechster Bezirk ".

H. albimacula triumphalis Murayama & Sibatani **stat. n.**

Horaga anytus triumphalis Murayama & Sibatani, 1943 : 40, pls. 5 & 6, figs. 8. Formosa.

Well figured by Shirôzu (1960 : 313, fig. 346 ; pl. 67, figs. 719–722).

A pleasing closure to the range of this species. Shirôzu's illustrations show this subspecies to have the ♂ genitalia characteristic of the species, and an appearance near to the bluish forms from Malaya. The white bands on the underside are slightly better marked on the hind wing but narrow on the fore wing.

Fore wing length 12–13 mm.

Horaga amethysta

(Pl. 1, fig. 13 ; Pl. 3, fig. 22)

Very little is known of this extremely rare and elusive species with the monstrous and specialized genitalia.

First found in Borneo, several specimens are known from different sources there, but it was not till 1941 that Corbet gathered various examples from Malaya and recognized that it also occurred in Java and Nias. Western forms are small but it increases in size eastwards. It has been taken on mountain peaks of over 5,000 feet, through all elevations down to practically sea level, and is probably, like other species of the genus, an " open hilltop " or " jungle canopy " insect.

Seitz does not illustrate, nor even mention, *amethysta*. I figure the smallest subspecies, *isna*, from Nias. The only other illustrations have been Druce's originals of 1902.

The species is distinctive on the upperside in the small size of the fore wing white spot, which is at most as deep as the width of the cell, and on the underside in the narrow linearity of the median bands and the prominence of the metallic green markings. The upperside violet colour is also of a different, uniformly shining, quality to the dusted bluish of other species.

The wings are rounded, and fore wing veins 11 and 12 tend to be more strongly bowed towards each other than usual ; in one ♀ specimen ex coll. Cator from Sandakan (" S'kan ") they palpably touch.

The possibility that the name *ciniata* may have to be adopted as the senior specific name is discussed after subspecies *amethysta*. I insert it as a floating subspecies below, awaiting positive evidence from Batchian for its correct allocation in the classification.

H. amethysta purpurescens Corbet

Horaga amethystus purpurescens Corbet, 1941 : 47. Malaya, S. Burma.

This name has on occasion been misspelt *purpurascens*.

The holotype and allotype specimens which were in the F.M.S. Museum, Malaya, until the 1939–45 war, must be presumed lost, but there survive in B.M. (N.H.) three females of Corbet's original type-series.

The upperside is deep lustrous violet with dark brown borders up to 2 mm. wide in the ♂, whose fore wing white spot is obsolescent ; in the ♀ the borders are broader and diffuse, expanding at the fore wing apex to reach the white spot, which is narrow and placed across the cell-end.

The rich ochreous underside fades to ash-grey in worn specimens, which also may lose the metallic green scales on the hind wing band.

This subspecies is similar to the Bornean one, but the borders tend to be narrower and the white fore wing spot slightly larger.

Burmese specimens are smaller, have still narrower borders and a larger spot, but these differences are slight.

The fore wing length is 12–14 mm.

B.M. (N.H.) 5 ♀, Mergui (*Evans*), Renong (2) (*Doherty*), Malaya (2) (*Corbet, Gunnery*). Other Malayan specimens in colls. Eliot and Stubbs were taken in the Cameron Highlands, Frasers Hill, on Mount Ophir summit, in the plains, and on Pulau Parit, Kerimun Is. (west of Singapore).

H. amethysta isna Corbet

(Pl. 1, fig. 13 ; Pl. 3, fig. 22)

Horaga amethystus isna Corbet, 1941 : 48. Nias Is.

An interesting specimen in good condition is small and pale, recalling its compatriot *onyx zuniga*. Fore wing length 11½ mm.

The upperside of the unique ♂ is lavender rather than violet, with a prominent round white spot at the end of the fore wing cell, below which the underside band shows through ; the borders are regular, narrow, and obsolete at the costa. The white band on the fore wing underside is relatively wide (1 mm.).

B.M. (N.H.) ♂ Holotype, Nias Is.

H. amethysta overdijkinki Corbet

Horaga amethystus overdijkinki Corbet, 1941 : 48. W. Java.

The unique ♀ is of a much bluer tint than in all other specimens of this species, but still uniform over all the upperside. The brown borders are narrower and more regular than in all other ♀♀. The fore wing white spot is larger and elongate, just extending into spaces 3 and 5. The fore wing length is 12½ mm.

B.M. (N.H.) ♀ Holotype, Mt. Halimon, Soekaboemi, W. Java.

H. amethysta amethysta H. H. Druce

Horaga amethystus H. H. Druce, 1902 : 118, pl. 11, figs. 4, 5. N. Borneo.

The ♂ upperside is deep shining violet with regular narrow brown borders and a minute white fore wing spot. The ♀, with a larger diffuse spot, has broader borders than any other subspecies so far. The underside fore wing median band is entire but linear in the ♂, straight and ½ mm. wide in the ♀ ; the hind wing band as usual is linear and completely overlaid with shining green scales.

Fore wing lengths are 12 mm. (♂), 13–14 mm. (♀).

B.M. (N.H.) ♂ Holotype, British N. Borneo. (The female allotype from " N. Borneo, probably East Coast Residency " (*Pryer*) is in coll. Hope Dept., Oxford.) 2 ♀, N.E. Borneo, Sandakan.

H. ciniata (*? amethysta*) *ciniata* (Hewitson)

Myrina ciniata Hewitson, 1863 : 35, pl. 14, figs. 30, 31. " Batchian and India ".
M. ciniata Hewitson ; Hewitson, 1869 : supplement 6. ♂, no loc.
Horaga ciniata (Hewitson) Moore, 1881 : 99. " Ceylon ".
H. ciniata (Hewitson) ; Moore, 1883 : 525. " confined to Batchian ".
H. ciniata (Hewitson) ; de Nicéville, 1890 : 417. Batchian.
Horaga samoena Grose Smith, 1895 : 513 (♂ nec ♀). Batchian.
H. ciniata (Hewitson) ; Fruhstorfer, 1897 : 114–5. N. & S. Celebes.
H. ciniata (Hewitson) ; Swinhoe, 1911 : 12. Celebes.
H. ciniata (Hewitson) ; Fruhstorfer, 1912 : 233. " Type aus Sud Celebes ".
H. ciniata (Hewitson) ; Seitz, 1926 : 982, pl. 158, figs. a1, a2. S. Celebes.
H. syrinx ciniata (Hewitson) ; Corbet, 1941 : 50. S. Celebes.

There has been unfortunate confusion and uncertainty over the identity and application of the name *ciniata* which even now cannot be fully resolved for lack of material.

Hewitson described specimens varying in size from 0·9 to 1·3 inches' expanse (equivalent by his method to fore wing lengths 11½ to 16½ mm.) from Batchian and

India, figuring the upper and undersides of a clearly identifiable ♀, though he did not state its sex. This ♀ I have located in the B.M. (N.H.) main collection, with Hewitson's labels reading " Batchian " and, glued underneath, two scraps " ciniata " and " Ba . . .". It agrees perfectly with the 1863 description and illustrations, with a fore wing length 15 mm.

In 1869 Hewitson said that his original figure " was from a female. I have since received the male, which does not differ from it except in its greater size and in the more acute apex of the anterior wing ". He increased the size range of the species now to 0·9–1·4 inches (fore wing length 11½–18 mm.).

Standing in the B.M. (N.H.) Type Collection as the type specimen of *ciniata* Hew. is a ♂, with Hewitson labels reading " Calabar " and, glued below, a scrap reading " Celeb." This ♂ has a fore wing length 18 mm., and the fore wings are very pointed. I am confident that this is the ♂ to which Hewitson referred. It is clear that it is not conspecific with the much smaller ♀♀ which Hewitson originally had named *ciniata*. Hewitson gave no more information on it than my quotation above, and no locality, though it undoubtedly came from Celebes.

Moore had obviously been studying this problem when, in 1883, in correcting his own earlier error referring to Ceylon, he said firmly that *ciniata* was confined to Batchian (and *syrinx* to Amboina). He was followed by de Nicéville, but by 1897 the false ♂ seems to have appeared and misled all later authors.

No other reference to this subject can be found, nor any explanation for the quite unwarrantable appearance of this ♂ in the status of a type specimen, and only a ruling by the International Commission on Zoological Nomenclature could now legalize such status. I do not consider a request for such a ruling justifiable. The original 1863 description of the small ♀, though confusing localities, was good, and so was the illustration of the ♀ from Batchian, which has been reproduced by Seitz, and the ♂, from a different locality, has never been described nor illustrated. I have therefore placed and discussed the ♂ already, with a second similar one from Celebes, where they belong under *syrinx permagna*.

I designate the ♀ I have referred to, ex coll. Hewitson from Batchian, to be the LECTOTYPE of *Myrina ciniata* Hewitson (1863). Hewitson's description and illustrations, the latter reproduced by Seitz, are good except that the size should be given as fore wing length 15 mm. (instead of expanse 0·9 to 1·3 inches). The specimen is in the B.M. (N.H.) Type Collection.

Under *syrinx samoena* I have already discussed Grose Smith's specimens of that name and segregated his unique small ♂ with the violet-centred hind wing as being different. It has no abdomen, palpi nor fore legs, but its wings do look masculine. Nor has it sexual insignia, so assuming it is a ♂ it must be either a subspecies of *albimacula*, one of *amethysta*, or a new species. The last is unlikely ; the size fits either of the alternatives, and both the deep violet colour and the reduced fore wing white markings indicate *amethysta*. Its 14 mm. fore wing matches well the 15 mm. of Hewitson's ♀ *ciniata*, and they may well be conspecific.

More cannot be decided until fresh material of both sexes of all species is available from Batchian. If they are conspecific, the name *ciniata* will be the senior taxon in

the species I have dealt with as *amethysta* (or possibly *albimacula*). If they are distinct, the ♀ will still bear the senior name *ciniata* to the appropriate species, but the ♂ will represent a new species or subspecies, as I have already fixed the name *samoena* to apply to the Batchian race of *syrinx*.

It must be remembered that neither *albimacula* nor *amethysta* is yet known from the Batchian side of Wallace's Line although both approach it. The effect of crossing it is unpredictable and often spectacular, though in the known case of *syrinx* it is only moderate.

B.M. (N.H.) ♀ Lectotype, Batchian (ex coll. Hewitson). 1 ♂ (?), (the " ♂ Type " of *samoena* Grose Smith).

Horaga selina Grose Smith

(Pl. 1, fig. 14 ; Pl. 3, fig. 23)

Horaga selina Grose Smith, 1895 : 513. " South Celebes ".

An interesting species not listed by Seitz. Nearly half the 20 specimens in B.M. (N.H.), most ex coll. Rothschild, were collected by Doherty in 1891, the rest in 1896 ; all found by the same man in the one restricted locality. The five year interval allows one to hope the species survives there still.

The sexes are alike and the figure on Pl. 1 shows their appearance well. The upperside is very dark brown and white ; the fore wing patch long, tapered and oblique, often coated with orange scales. The underside white band is narrow and regular, and followed on the hind wing by a straight ochreous line and an irregular metallic green one before the distinctive wide postdiscal black and grey irrorated area. The fore wing length is 15–18 mm.

In effect the submarginal markings of the hind wing underside are shifted in to the discal area, and the outer third is " filled in " with the irrorations. It is interesting that this phenomenon is paralleled in the quite unrelated but also 3-tailed *Semanga superba* (Druce), a more widespread species with the fore wing and the basal half of the hind wing plain brown but whose " terminal red spots and metallic lunules " are postmedian, in a marbled grey area extending to the termen.

B.M. (N.H.) ♂ Holotype, ♀ Allotype, 6 ♀, Celebes, west coast ; Taweya, north of Palos Bay (*Doherty*, August–September 1891) ; 5 ♂, 7 ♀, the same (August–September 1896).

Horaga lefebvrei

(Pl. 1, fig. 15 ; Pl. 3, fig. 24)

This aberrant Philippine species is the only one with marked sexual dimorphism on the underside, a fact which has led to some synonymy. Veins 11 and 12 of the fore wing are not so close as in other species, which caused one of the synonyms to be made in *Rathinda*.

The upperside is like that of *selina* but the white patch is ovate and more central on the fore wing, while the sub-basal area is more or less dusted with pale blue scales, particularly in the ♂.

The underside of the ♂ is shown on Pl. 1 (a specimen from Mindoro where the hind wing ground colour is uniformly ochreous). The ground colour normally is dark

brown shading to chestnut at the fore wing apex and to ochreous in the dorsal half of the hind wing ; the white costal streaks, central spot, and chain of postdiscal markings (which dorsally become overlaid with metallic scales) on the hind wing are all heavily ringed with dark brown ; and there is a complete submarginal series of metallic green lunules capping black terminal spots or dots. The subtornal spots on either side of the end of hind wing vein 2 are well marked and both black.

The ♀ differs on the underside by having much more extensive white markings on both wings ; the hind wing central spot becomes subtriangular, one apex extending to the base, and the postdiscal chain is more or less conjoined.

Either sex (B.M. (N.H.) has one such of each from Luzon and a male from Mindanao) may have the whole under surface shot with a purple gloss, and the metallic markings blue instead of green.

The ♂ has a distinctive plume of suberect soft brown and grey hairs along the upper edge of the hind wing cell on the upperside, and its palpi are clothed with two forms of translucent scales giving them a greasy cream appearance below the black tip.

H. lefebvrei lefebvrei (C. & R. Felder)

Myrina lefebvrei C. & R. Felder, 1862 : 291. Luzon.
Horaga lefebvrei (Felder) Semper, 1890 : 215.
Rathinda cuzneri Schultze, 1907 : 361, pl. 1, fig. 1. Luzon. **comb., ♂ f. & stat. n.**

The name has on occasion been misspelt *lefevrei*.

Figured also by Seitz : pl. 158, figs. a4 (♂ nec ♀), a5.

The appearance has been described in the paragraphs above. The fore wing lengths are 14–17 mm. (♂), 14–18 mm. (♀).

The Felders' original good descriptions were of a normal ♂ with minimal white markings on the underside, and a normal ♀ with these markings large. The type specimens agree.

Schultze described fully, and figured by photograph, a normal ♀ with maximum white on the underside, saying that the ♂ was similar. We may avoid absolute synonymy by designating the aberrant ♂ with enlarged white markings as ♂ form *cuzneri* (Schultze) f. & stat. n.

B.M. (N.H.) ♂ holotype, ♀ Allotype, 3 ♂, 4 ♀, Luzon.

H. lefebvrei osma Fruhstorfer

Horaga lefebvrei osma Fruhstorfer, 1912 : 233. Mindanao.
♀ f. *melera* Seitz, 1926 : 983, pl. 158, fig. a7. **syn. n.**

Figured by Seitz ; pl. 158, figs. a6 (as *asma*), a7 (*as melera*).

Fruhstorfer tersely described this race as differing from *lefebvrei* in having the fore wing white spot smaller and the terminal borders darker brown on both wings below. These differences are very slight, but comparing series from Luzon and Mindanao there is a trend in the latter for all underside white markings to be smaller. The size is as *lefebvrei*, but a dwarf male in B.M. (N.H.) has a fore wing length of only 11 mm.

Seitz described ♀ form *melera* as " with very enlarged white spots and a much reduced brick-red area on the hind wing underside ". Again, as his illustration shows, this is the normal ♀, and *melera* can only be regarded as a subjective synonym of *osma* unless, as in Luzon, a Mindanao ♂ form with enlarged white markings is found. Fruhstorfer's type specimens are a small and poorly marked ♂, and a normal ♀ exactly like Seitz' illustration of *melera*.

B.M. (N.H.) ♂ Holotype, ♀ Allotype, Mindanao ; 12 ♂, 12 ♀, Mindanao (mostly Lanao Plain, June 1914, *Wileman*).

H. lefebvrei osmana subsp. n.

(Pl. 1, fig. 15 ; Pl. 3, fig. 24)

Both sexes in Mindoro show differences from the Luzon and Mindanao races which, though slight, are constant and exceed those between the latter.

The fore wing length is 13½–15½ mm., slightly smaller than *lefebvrei* and *osma*.

The fore wing upperside white area is reduced from an ovate to a narrow, almost rectangular, oblique band 2–2½ mm. wide in the ♂, 3 mm. in the ♀, and blue scaling at the base is minimal.

On the underside all white markings are much reduced in both sexes, and the hind wing ground colour is uniform rufous ochreous instead of shading to dark brown in the apical half ; the dark brown edging to the white markings is prominent and catenulate.

B.M. (N.H.) ♂ Holotype, ♀ Allotype, Mindoro (*Platen*). 4 ♂, 2 ♀, Mindoro (*Platen; Everett*, December 1894 ; *Staudinger*).

Horaga rarasana Sonan

(Pl. 1, fig. 16 ; Pl. 3, fig. 21)

Horaga rarasana Sonan, 1936 : 207, pl. 14, fig. 4. Formosa.

This species has also been well illustrated by Shirôzu (1960 : 311, fig. 345 ; pl. 67, figs. 711–714). It is most distinctive.

The illustration on Pl. 1 shows the pure black and clouded white fore wing and the black and shining violet hind wing upperside ; and the underside which is chalk white with dark brown cell-end and postdiscal bands, beyond which the terminal borders are dark ochreous on the fore wing and bright ochreous on the hind, the latter carrying the bold metallic green lunulate markings.

The fore wing length is 17 mm. (♂), 20 mm. (♀).

The fore wing costal veins 11 and 12 are only slightly bowed towards each other in this species.

B.M. (N.H.) 2 ♂, 1 ♀, Formosa ; Mt. Rara, July 1964 (*Murayama*).

SYNONYMIC LIST OF THE HORAGINI

RATHINDA Moore, 1881
syn. *CUPIDO* Hübner, 1819 [praeocc.]
R. amor (Fabricius, 1775) Ceylon, India, E. Pakistan.
syn. *triopas* (Cramer, 1780)

HORAGA Moore, 1881	
H. onyx cingalensis Moore, 1883	Ceylon, S. India.
onyx (Moore, 1857)	N. India, E. Pakistan, Burma, Thailand.
f. *arta* Fruhstorfer, 1914	(dry season form).
rana de Nicéville, 1889	Andaman Is.
zuniga Fruhstorfer, 1912	Nias Is.
sardonyx Fruhstorfer, 1914	Sumatra, Malaya, Banka, Sarawak.
fruhstorferi Corbet, 1941	Java.
akronyx subsp. nov.	Lombok, Sambawa.
moltrechti Matsumura, 1919	Formosa, Hong Kong.
syn. *asakurai* Nire, 1920	
H. syrinx sikkima Moore, 1883	N. India, E. Pakistan, N. Burma.
moulmeina Moore, 1883	S. Burma, S. Thailand.
artontes Fruhstorfer, 1912	Nias Is.
maenala (Hewitson, 1869)	Sumatra, Malaya, Banka, Sarawak, Kalimantan, Sabah.
synn. & ff. :	
halba Distant, 1886	
affinis H. H. Druce, 1895	
corniculum H. H. Druce, 1895	
onychina (Staudinger, 1889)	Java.
syn. *holothura* Swinhoe, 1894	
privigna Fruhstorfer, 1897	Bali, Lombok.
decolor (Staudinger, 1889)	Palawan.
joloana Fruhstorfer, 1912	Jolo Is.
paulla Fruhstorfer, 1912	Bazilan Is.
camiguina Semper, 1890	Camiguin Is., Mindanao.
permagna Fruhstorfer, 1912	Sulawesi.
samoena Grose Smith, 1895	Batchian Is.
syrinx (C. Felder, 1860)	Amboina, Ceram.
schoutensis Joicey & Talbot, 1916	N.W. Irian—Papua.
H. albimacula viola Moore, 1882	Ceylon, India, E. Pakistan, Burma.
albimacula (Wood-Mason & de Nicéville, 1881)	Andaman Is.
malaya Corbet, 1941	Malaya.
anara Fruhstorfer, 1898	Java.
violetta subsp. nov.	Bali.
bellula Fruhstorfer, 1897	Sambawa.
chalcedonyx Fruhstorfer, 1914	Kalimantan (west coast).
syn. *onyxitis* Fruhstorfer, 1914	
albistigmata Moulton, 1912	Sarawak.
anytus (Staudinger, 1889)	Palawan.
taweya subsp. nov.	Sulawesi (west coast).
bilineata Semper, 1890	Mindanao.

triumphalis Murayama & Sibatani, 1943	Formosa.
H. amethysta purpurescens Corbet, 1941	S. Burma, Malaya.
isna Corbet, 1941	Nias Is.
overdijkinki Corbet, 1941	Java.
amethysta H. H. Druce, 1902	Sarawak, Sabah.
H. ciniata (? syn. *amethysta*) *ciniata* (Hewitson, 1863)	Batchian Is.
H. selina Grose Smith, 1895	West Sulawesi.
H. lefebvrei osma Fruhstorfer, 1912	Mindanao.
syn. *melera* Seitz, 1926	
osmana subsp. nov.	Mindoro.
lefebvrei (C. & R. Felder, 1862)	Luzon.
♂ f. *cuzneri* (Schultze, 1907)	
H. rarasana Sonan, 1936	Formosa.

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INDEX

Indexed below are the text references to the taxa only.

Synonyms in italics.

* Asterisked are the taxa illustrated on Plate 1.